

**DECLARATION FOR UTILITY PATENT APPLICATION**

AS BELOW-NAMED INVENTORS, WE HEREBY DECLARE THAT:

Our residences, post office addresses, and citizenship are as stated below next to our names.

We believe we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled: SHARED LOOKUP TABLE ENHANCEMENTS FOR THE EFFICIENT IMPLEMENTATION OF BARREL SHIFTERS, the specification of which is attached hereto.

WE HEREBY STATE THAT WE HAVE REVIEWED AND UNDERSTAND THE CONTENTS OF THE ABOVE-IDENTIFIED SPECIFICATION, INCLUDING THE CLAIMS, AS AMENDED BY ANY AMENDMENT REFERRED TO ABOVE.

We acknowledge the duty to disclose information which is material to the patentability as defined in 37 C.F.R. § 1.56.

We hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

Application No.	Country	Date of Filing	Priority Claimed?
			<input type="checkbox"/> Yes <input type="checkbox"/> No

We hereby claim benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:


Application Serial No.	Filing Date

We hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, we acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

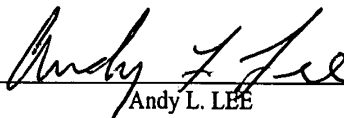
Application Serial No.	Filing Date	Status
		<input type="checkbox"/> Patented <input type="checkbox"/> Pending <input type="checkbox"/> Abandoned

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

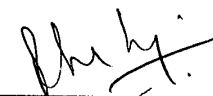
3/16/04  
 Date

  
 Name: Michael HUTTON  
 Residence: Mountain View, California  
 Citizenship: Canada  
 Post Office Address: 209 Post Street, Mountain View, California 94040

3/12/04  
 Date

  
 Name: Andy L. LEE  
 Residence: San Jose, California  
 Citizenship: United States of America  
 Post Office Address: 6936 Rainbow Drive, San Jose, California 95129

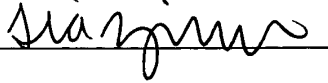
03/11/04  
 Date

  
 Name: Rahul SAINI  
 Residence: Union City, California  
 Citizenship: India  
 Post Office Address: 131 Red Cedar Lane, Union City, California 94587

306812005200

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Airbill No. EV 336624690 US in an envelope addressed to: MS Patent Application, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on March 22, 2004.

  
Tia B. Zimmerman

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of: Michael HUTTON et al.

Examiner: Not Yet Assigned

Group Art Unit: Not Yet Assigned

Serial No.: Not Yet Assigned

Filing Date: Concurrently Herewith

For: SHARED LOOKUP TABLE  
ENHANCEMENTS FOR THE  
EFFICIENT IMPLEMENTATION OF  
BARREL SHIFTERS

ASSOCIATE POWER OF ATTORNEY

MS Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

Please recognize the following attorneys and agents:

Derek E. Minihane (Reg. No. 39,774)      Henry Ohab (Reg. No. 45,854)

Archana Ojha (Reg. No. 53,408)

all of Altera Corporation, 101 Innovation Drive, San Jose, California 95134, as my associates in the above-identified patent application to inspect the file, to prepare and file amendments, to inspect and make copies thereof and of any papers in any appellate or inter partes proceedings in which the application may be or become involved, and generally to

conduct all business in the United States Patent and Trademark Office relating to the prosecution of the application or any application that claims priority from this application.

Please continue to direct all communications to:

Alan S. Hodes  
Morrison & Foerster LLP  
775 Page Mill road  
Palo Alto, CA 94304-1018

Respectfully submitted,



Dated: March 22, 2004

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Alan S. Hodes  
Registration No. 38,185

Morrison & Foerster LLP  
775 Page Mill road  
Palo Alto, CA 94304-1018  
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Facsimile: (650) 494-0792

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>POWER OF ATTORNEY and CORRESPONDENCE ADDRESS INDICATION FORM</b>	Application Number	Not Yet Assigned
	Filing Date	Concurrently Herewith
	First Named Inventor	Michael HUTTON
	Title	SHARED LOOKUP TABLE ENHANCEMENTS FOR THE EFFICIENT IMPLEMENTATION OF BARREL SHIFTERS
	Art Unit	Not Yet Assigned
	Examiner Name	Not Yet Assigned
Attorney Docket No.		306812005200

I hereby appoint:

☒ Practitioners at Customer Number 

OR

☐ Practitioner(s) named below:

Name	Registration Number	Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☒ The above-mentioned Customer Number.

OR

☐ The address associated with  
Customer Number:

OR

☐ Firm or  
Individual Name

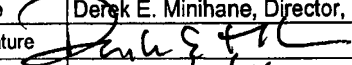
Address

City	State	Zip
Country	Telephone	Fax

I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
**SIGNATURE of Applicant or Assignee of Record**

Name	Derek E. Minihane, Director, Intellectual Property Law and Assistant Secretary		
Signature			
Date	3/16/04	Telephone	

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒ \*Total of 1 forms are submitted.

**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: Michael HUTTON et al.

Application No./Patent No.: Not Yet Assigned Filed/Issue Date: Concurrently Herewith

Entitled: SHARED LOOKUP TABLE ENHANCEMENTS FOR THE EFFICIENT IMPLEMENTATION OF BARREL SHIFTERS

Altera Corporation, a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or

2. ☐ an assignee of less than the entire right, title and interest.

The extent (by percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

A. [x] An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

B. [ ] A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

[ ] Additional documents in the chain of title are listed on a supplemental sheet.

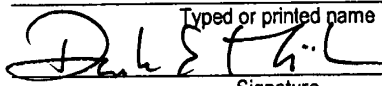
[ ] Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

3/16/04  
Date

\_\_\_\_\_  
Telephone Number

Derek E. Minihaue  
Typed or printed name  
  
Signature

Director, Intellectual Property Law and Assistant Secretary  
Title

ASSIGNMENT  
JOINT

COPY

THIS ASSIGNMENT, by Michael HUTTON, Andy L. LEE, and Rahul SAINI (hereinafter referred to as the assignors), residing at 209 Post Street, Mountain View, California 94040; 6936 Rainbow Drive, San Jose, California 95129; and 131 Red Cedar Lane, Union City, California 94587, respectively, witnesseth:

WHEREAS, said assignors have invented certain new and useful improvements in SHARED LOOKUP TABLE ENHANCEMENTS FOR THE EFFICIENT IMPLEMENTATION OF BARREL SHIFTERS, set forth in an application for Letters Patent of the United States, having an oath or declaration executed on even date herewith; and

WHEREAS, Altera Corporation, a corporation duly organized under and pursuant to the laws of Delaware and having its principal place of business at 101 Innovation Drive, San Jose, California 95134 (hereinafter referred to as the assignee) is desirous of acquiring the entire right, title and interest in and to said inventions and said application for Letters Patent of the United States, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon:

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, said assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto said assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions, application for Letters Patent, and any and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted therefor and thereon, and in and to any and all divisions, continuations and continuations-in-part of said application, or reissues or extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by said assignee, for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the assignors, had this sale and assignment not been made.


AND for the same consideration, said assignors hereby covenant and agree to and with said assignee its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, said assignors are the sole and lawful owners of the entire right, title and interest in and to said inventions and the application for Letters Patent above-mentioned, and that the same are unencumbered and that said assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, said assignors hereby covenant and agree to and with said assignee, its successors, legal representatives and assigns, that said assignors will, whenever counsel of said assignee, or the counsel of its successors, legal representatives and assigns, shall advise that any proceeding in connection with said inventions, or said application for Letters Patent, or any proceeding in connection with Letters Patent for said inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation or

continuation-in-part of any application for Letters Patent or any reissue or extension of any Letters Patent, to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent for said inventions, without charge to said assignee, its successors, legal representatives and assigns, but at the cost and expense of said assignee, its successors, legal representatives and assigns.

AND said assignors hereby request the Commissioner of Patents to issue said Letters Patent of the United States to said assignee as the assignee of said inventions and the Letters Patent to be issued thereon for the sole use of said assignee, its successors, legal representatives and assigns.


3/16/04  
Date

  
Michael HUTTON

3/12/04  
Date

  
Andy L. LEE

03/11/04  
Date

  
Rahul SAINI